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## RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/087,573

DATE: 03/19/2002

TIME: 16:01:50

Input Set : A:\20010041.app

Output Set: N:\CRF3\03192002\J087573.raw

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3 <110> APPLICANT: SCHETTERS, Theodorus PM
4     CARCY, Bernard PD
5     DRACULOVSKI, Pascal R
6     GORENFLOT, Andre F
8 <120> TITLE OF INVENTION: BABESIA CANIS VACINE
10 <130> FILE REFERENCE: SCHETTERS
C--> 12 <140> CURRENT APPLICATION NUMBER: US/10/087,573
C--> 13 <141> CURRENT FILING DATE: 2002-02-28
15 <150> PRIOR APPLICATION NUMBER: EP 01200816.5
16 <151> PRIOR FILING DATE: 2001-03-06
18 <160> NUMBER OF SEQ ID NOS: 10
20 <170> SOFTWARE: PatentIn Ver. 2.1
22 <210> SEQ ID NO: 1
23 <211> LENGTH: 1135
24 <212> TYPE: DNA
25 <213> ORGANISM: Babesia canis
27 <220> FEATURE:
28 <221> NAME/KEY: CDS
29 <222> LOCATION: (75)..(500)
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32 gaatttcggca cgagccctgc tatactgtgc ttgtcaacta actccatcgt aataatttaa 60
34 tataataata aagg atg gaq teg aca tca aca acg acc aac ttt qtt gcc 110
35             Met Glu Ser Thr Ser Thr Thr Thr Asn Phe Val Ala
36             1             5             10
38 gag aac cgt ccc acc ttt qgt qag acg ttt gat qtg atg aag gaa gct 158
39 Glu Asn Arg Pro Thr Phe Gly Glu Thr Phe Asp Val Met Arg Glu Ala
40             15             20             25
42 ttg ctt cgt qta aag tcc tct qaa cgc ttg qca atg ctc aga gca ctt 206
43 Leu Leu Arg Val Lys Ser Ser Glu Arg Leu Ala Met Leu Arg Ala Leu
44             30             35             40
46 gca gga atg tgc qgt cac cgc gtc ctt cct gcc act qgt gct tct gcg 254
47 Ala Gly Met Cys Gly His Arg Val Leu Pro Gly Thr Gly Ala Ser Ala
48 45             50             55             60
50 ata gcg qca acg qta acc cca aag qgg gct tcg atg aag ctt aaa cca 302
51 Ile Ala Ala Thr Val Thr Pro Lys Gly Ala Ser Met Lys Leu Lys Pro
52             65             70             75

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63 Asn His Arg Leu Pro Glu Gly His Pro Leu Leu Glu Lys Arg Ala Glu
64      110      115      120
66 tat ttt cgt cac ctt aqa tct ctt aag aac caa qqa gtc aat aqa etc 494
67 Tyr Phe Arg His Leu Arg Ser Leu Lys Ser Gln Gly Val Asn Arg Leu
68 125      130      135      140
70 atc taa gaaggcacta cgtagggtacc gtgcctctat gaggaataac aaccgactag 550
71 Ile
73 tgcacaatac acgaccagtt ctaccaaaag tagagcctga ctctaattcta ccattcggcc 610
75 agcgacggag tcgcatgaca acgtggaate ttagaccacg ccggacgggt tatccgtcaa 670
77 atggtacttt ggcagttacg gaactcctga tctcgattta tagatcaaac ttctacacct 730
79 tgaaggtggt cgaggaagg agatgtacgt gctgcaacac ccataaggag caagctttgc 790
81 tactctatc cgttacctc cagctatata gtgcactgca ctgagttgga aggtctgtat 850
83 tcgtagaata ctgcaaaacc aggatatgag tcgagggcag cctcacggga ctacgtccga 910
85 ggggtaccct aacgggctgc tgaactaggt tcagccagcg ctccctgtga gtatgtcatt 970
87 cggggtcctt cggggcccg ggcagtttcg actggtgtag gtttgcccta ctgaggtact 1030
89 tgcgacgcg aagcgccctc gttcaaaaaga acgcgcagc ctagcagag aaatgcgagg 1090
91 gcattactct tcgagtcaaa aaaaaaaaaa aaaaaaaac tcgag 1135

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94 &lt;210&gt; SEQ ID NO: 2

95 &lt;211&gt; LENGTH: 141

96 &lt;212&gt; TYPE: PRT

97 &lt;213&gt; ORGANISM: Babesia canis

99 &lt;400&gt; SEQUENCE: 2

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100 Met Glu Ser Thr Ser Thr Thr Thr Asn Phe Val Ala Glu Asn Arg Pro
101 1      5      10      15
102 Thr Phe Gly Glu Thr Phe Asp Val Met Arg Glu Ala Leu Leu Arg Val
103      20      25      30
104 Lys Ser Ser Glu Arg Leu Ala Met Leu Arg Ala Leu Ala Gly Met Cys
105      35      40      45
106 Gly His Arg Val Leu Pro Gly Thr Gly Ala Ser Ala Ile Ala Ala Thr
107      50      55      60
108 Val Thr Pro Lys Gly Ala Ser Met Lys Leu Lys Pro Pro Arg Pro Gln
109 65      70      75      80
110 Ser Thr Lys Ser Pro Glu Leu Arg Glu Leu Ser Arg Lys Ile Arg Glu
111      85      90      95
112 Met Asn Lys Thr Ile Ser Gln Glu Ser Ala Arg Val Asn His Arg Leu
113      100      105      110
114 Pro Gln Gly His Pro Leu Leu Glu Lys Arg Ala Glu Tyr Phe Arg His
115      115      120      125
116 Leu Arg Ser Leu Lys Ser Gln Gly Val Asn Arg Leu Ile
117      130      135      140

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121 &lt;210&gt; SEQ ID NO: 3

122 &lt;211&gt; LENGTH: 1134

123 &lt;212&gt; TYPE: DNA

124 &lt;213&gt; ORGANISM: Babesia canis

126 &lt;220&gt; FEATURE:

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133	tataataata aagg atg gag tcg aca tca aca acg acc aac ttt gtt gcc	110
134	Met Glu Ser Thr Ser Thr Thr Thr Asn Phe Val Ala	
135	1 5 10	
137	gag aac cgt ccc acc ttt ggt gag acg ttt gat gtg atg agg gaa gct	158
138	Glu Asn Arg Pro Thr Phe Gly Glu Thr Phe Asp Val Met Arg Glu Ala	
139	15 20 25	
141	ttg ctt cgt gta aag tcc tct gaa cgc ttg gca atg ctc aga gcc ctt	206
142	Leu Leu Arg Val Lys Ser Ser Glu Arg Leu Ala Met Leu Arg Ala Leu	
143	30 35 40	
145	gca gga atg tgc ggt cac cgc gtc ctt cct ggc act ggt gct tct gcc	254
146	Ala Gly Met Cys Gly His Arg Val Leu Pro Gly Thr Gly Ala Ser Ala	
147	45 50 55 60	
149	ata gcc gca acg gta acc cca aag ggg gct tcg atg aag ctt aaa cca	302
150	Ile Ala Ala Thr Val Thr Pro Lys Gly Ala Ser Met Lys Leu Lys Pro	
151	65 70 75	
153	ccg cgt ccg cag tca acg aag tct ccg gag ctc agg gag ctg tca ccg	350
154	Pro Arg Pro Gln Ser Thr Lys Ser Pro Glu Leu Arg Glu Leu Ser Arg	
155	80 85 90	
157	aag att cgc gaa atg aat aag act ata agt caa gaa tca gct cgg gta	398
158	Lys Ile Arg Glu Met Asn Lys Thr Ile Ser Gln Glu Ser Ala Arg Val	
159	95 100 105	
161	aac cac cgg ttg ccg gaa ggc cac cct ctc tta gag aag cgg gca gaa	446
162	Asn His Arg Leu Pro Glu Gly His Pro Leu Leu Glu Lys Arg Ala Glu	
163	110 115 120	
165	tat ttc gtc acc tta gat ctc tta aga gcc aag gag tca ata gac tca	494
166	Tyr Phe Val Thr Leu Asp Leu Leu Arg Ala Lys Glu Ser Ile Asp Ser	
167	125 130 135 140	
169	tct aag aag gca cta cgt agg tac cgt gcc tct atg agg aat acg aac	542
170	Ser Lys Lys Ala Leu Arg Arg Tyr Arg Ala Ser Met Arg Asn Thr Asn	
171	145 150 155	
173	cga cta gtg cac aat aqa cga cca gtt cta cca aag gta gag cct gac	590
174	Arg Leu Val His Asn Arg Arg Pro Val Leu Pro Lys Val Glu Pro Asp	
175	160 165 170	
177	tct aat cta cca ttc gcc caa cca cgg aqt cgc atg aca acg tgg aat	638
178	Ser Asn Leu Pro Phe Gly Gln Arg Arg Ser Arg Met Thr Thr Trp Asn	
179	175 180 185	
181	ctt aqa cca ccc cgg acg ggt tat ccg tca aat ggt act ttg gca gtt	686
182	Leu Arg Pro Arg Arg Thr Gly Tyr Pro Ser Asn Gly Thr Leu Ala Val	
183	190 195 200	
185	acg gaa ctc ctg atc tcg att tat aqa tca aac ttc tac acc ttg aag	734
186	Thr Glu Leu Leu Ile Ser Ile Tyr Arg Ser Asn Phe Tyr Thr Leu Lys	
187	205 210 215 220	
189	gtg gtc gaa gaa ggg aqa tgt acg tgc tgc aac acc cat aag gaa caa	782
190	Val Val Glu Glu Gly Arg Cys Thr Cys Cys Asn Thr His Lys Glu Gln	
191	225 230 235	

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198 Ser Val Gly Arg Ser Val Phe Val Glu Tyr Cys Lys Thr Arg Ile Cys
199          255          260          265
201 qtc gaa gca cgc ctc acc gga cta cgt ccg agg qtg acc cta acc ggc 926
202 Val Glu Ala Arg Leu Thr Gly Leu Arg Pro Arg Val Thr Leu Thr Gly
203          270          275          280
205 tgc tgaactaggt tcagccagcg ctctcctgtga qtatgtcatt ccgggtcctt 979
206 Cys
207 285
209 cggggcccgq gccagtttcg actggtgtag gtttgcctta ctaqaqtact tgcqacgcc 1039
211 aagcgcctcc gttcaaaaqa acgcgcaagc cctagcagaq aaatgcgagg gcattgactct 1099
213 tcgaatcaaa aaaaaaaaaa aaaaaaaaaa tcgaq 1134
216 <210> SEQ ID NO: 4
217 <211> LENGTH: 285
218 <212> TYPE: PRT
219 <213> ORGANISM: Babesia canis
221 <400> SEQUENCE: 4
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223 1 5 10 15
225 Thr Phe Gly Glu Thr Phe Asp Val Met Arg Glu Ala Leu Leu Arg Val
226 20 25 30
228 Lys Ser Ser Glu Arg Leu Ala Met Leu Arg Ala Leu Ala Gly Met Cys
229 35 40 45
231 Gly His Arg Val Leu Pro Gly Thr Gly Ala Ser Ala Ile Ala Ala Thr
232 50 55 60
234 Val Thr Pro Lys Gly Ala Ser Met Lys Leu Lys Pro Pro Arg Pro Gln
235 65 70 75 80
237 Ser Thr Lys Ser Pro Glu Leu Arg Glu Leu Ser Arg Lys Ile Arg Glu
238 85 90 95
240 Met Asn Lys Thr Ile Ser Gln Glu Ser Ala Arg Val Asn His Arg Leu
241 100 105 110
243 Pro Glu Gly His Pro Leu Leu Glu Lys Arg Ala Glu Tyr Phe Val Thr
244 115 120 125
246 Leu Asp Leu Leu Arg Ala Lys Glu Ser Ile Asp Ser Ser Lys Lys Ala
247 130 135 140
249 Leu Arg Arg Tyr Arg Ala Ser Met Arg Asn Thr Asn Arg Leu Val His
250 145 150 155 160
252 Asn Arg Arg Pro Val Leu Pro Lys Val Glu Pro Asp Ser Asn Leu Pro
253 165 170 175
255 Phe Gly Gln Arg Arg Ser Arg Met Thr Thr Thr Asp Asn Leu Arg Pro Arg
256 180 185 190
258 Arg Thr Gly Tyr Pro Ser Asn Gly Thr Leu Ala Val Thr Glu Leu Leu
259 195 200 205
261 Ile Ser Ile Tyr Arg Ser Asn Phe Tyr Thr Leu Lys Val Val Glu Glu
262 210 215 220
264 Gly Arg Cys Thr Cys Cys Asn Thr His Lys Glu Gln Ala Leu Leu Leu

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271          260          265          270
273 Leu Thr Gly Leu Arg Pro Arg Val Thr Leu Thr Gly Cys
274          275          280          285
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280 <212> TYPE: DNA
281 <213> ORGANISM: Babesia canis
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284 ggatcctaata acgactcact atagggagac caccatggag tcgacatcaa caacgaccaa 60
285 cttttttggc gagaaccgtc ccacctttgg                      90
288 <210> SEQ ID NO: 6
289 <211> LENGTH: 24
290 <212> TYPE: DNA
291 <213> ORGANISM: Babesia canis
293 <400> SEQUENCE: 6
294 gacgtttgat gtgatgaagg aagc                      24
297 <210> SEQ ID NO: 7
298 <211> LENGTH: 21
299 <212> TYPE: DNA
300 <213> ORGANISM: Babesia canis
302 <400> SEQUENCE: 7
303 aatgacatac tcacaggaag c                      21
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307 <211> LENGTH: 20
308 <212> TYPE: DNA
309 <213> ORGANISM: Babesia canis
311 <400> SEQUENCE: 8
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316 <211> LENGTH: 21
317 <212> TYPE: DNA
318 <213> ORGANISM: Babesia canis
320 <400> SEQUENCE: 9
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324 <210> SEQ ID NO: 10
325 <211> LENGTH: 21
326 <212> TYPE: DNA
327 <213> ORGANISM: Babesia canis
329 <400> SEQUENCE: 10
330 atgaggaatt cgaaccgact a                      21

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VERIFICATION SUMMARY

PATENT APPLICATION: US/10/087,573

DATE 03/19/2002

TIME 16:01:51

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L:13 M:271 C: Current Filing Date differs, Replaced Current Filing Date